



213823

5500W SILENT DIESEL GENERATOR

Owner's Manual



DO NOT RETURN TO STORE

If you are having problems with this product, call our customer service help line.
1-866-393-3968 M - F 9:00am - 6:00pm Central time

Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with the user's manual could result in personal injury and/or property damage! Retain the user's manual for future

⚠ DANGER

Using a generator indoors **CAN KILL YOU IN MINUTES**. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, **EVEN IF** doors and windows are open.



Only use **OUTSIDE** and far away from windows, doors, and vents.

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1. GENERAL SAFETY

Important safety information:

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE is used to address practices not related to personal injury.



WARNING! Read all instructions. Failure to follow all instructions listed below may result in fire, serious injury and/or Death. The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator. **Save these instructions.**

A. Set up precautions

1. Diesel fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials nearby.
2. Have multiple ABC class fire extinguishers nearby.
3. Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.
4. Set up and use only on a flat, level, well-ventilated surface.
5. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during set up.
6. Use only oil and fuel recommended in the "Specifications" section of this manual.

B. Operating precautions



1. **Carbon Monoxide Hazard using an engine indoors can Kill You in MINUTES.**

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell. NEVER use inside a home or garage, EVEN IF doors and windows are open. Only use OUTSIDE and far away from windows, doors, and vents.

2. Keep children away from the equipment, especially while it is operating.

3. Do not leave the equipment unattended when it is running. Turn off the equipment (and remove safety keys, if available) before leaving the work area.
4. Wear ANSI-approved safety goggles and hearing protection during use.
5. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to a heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.
6. Use only accessories that are recommended by Northern Tool for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.
7. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Diesel-powered engines may ignite the dust or fumes.
8. Stay alert, watch what you are doing and use common sense when operating this piece of equipment. Do not use this piece of equipment while tired or under the influence of drugs, alcohol or medication.
9. Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.
10. Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
11. Parts, especially exhaust system components, get very hot during use. Stay clear of hot parts.
12. Do not cover the engine or equipment during operation.
13. Keep the equipment, engine, and surrounding area clean at all times.
14. Use the equipment, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of equipment, taking into account the working conditions and the work to be performed. Use of the equipment for operations different from those intended could result in a hazardous situation.
15. Do not operate the equipment with known leaks in the engine's fuel system.
16. This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
17. When spills of fuel or oil occur, they must be cleaned up immediately. Dispose of fluids and cleaning materials as per any local, state, or federal codes and regulations. Store oil rags in a bottom-ventilated, covered, metal container.
18. Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.
19. Before use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the equipment's operation. **If damaged, have the equipment serviced before using.** Many accidents are caused by poorly maintained equipment.
20. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.
21. Wash hands with soap and water after handling diesel fuel or lubricating oil.

C. Service precautions

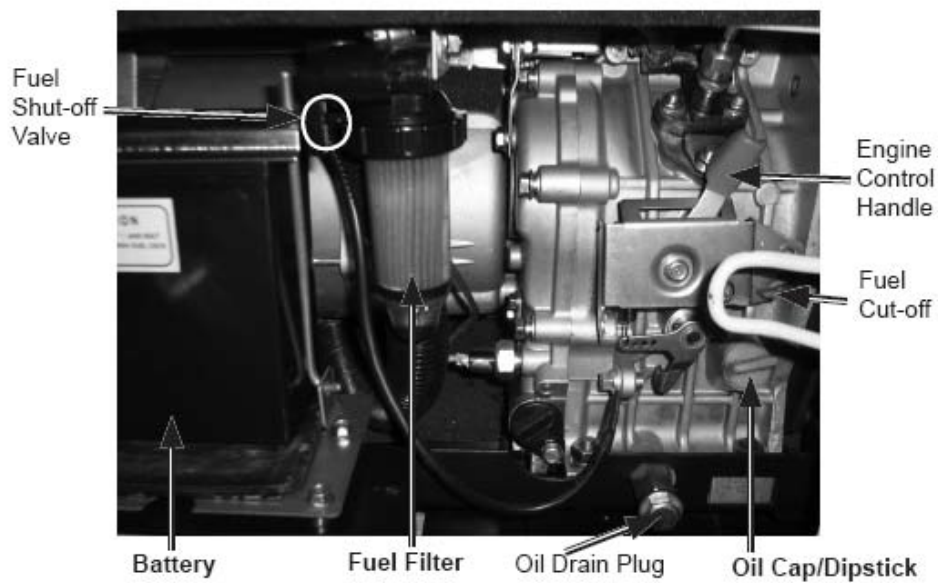
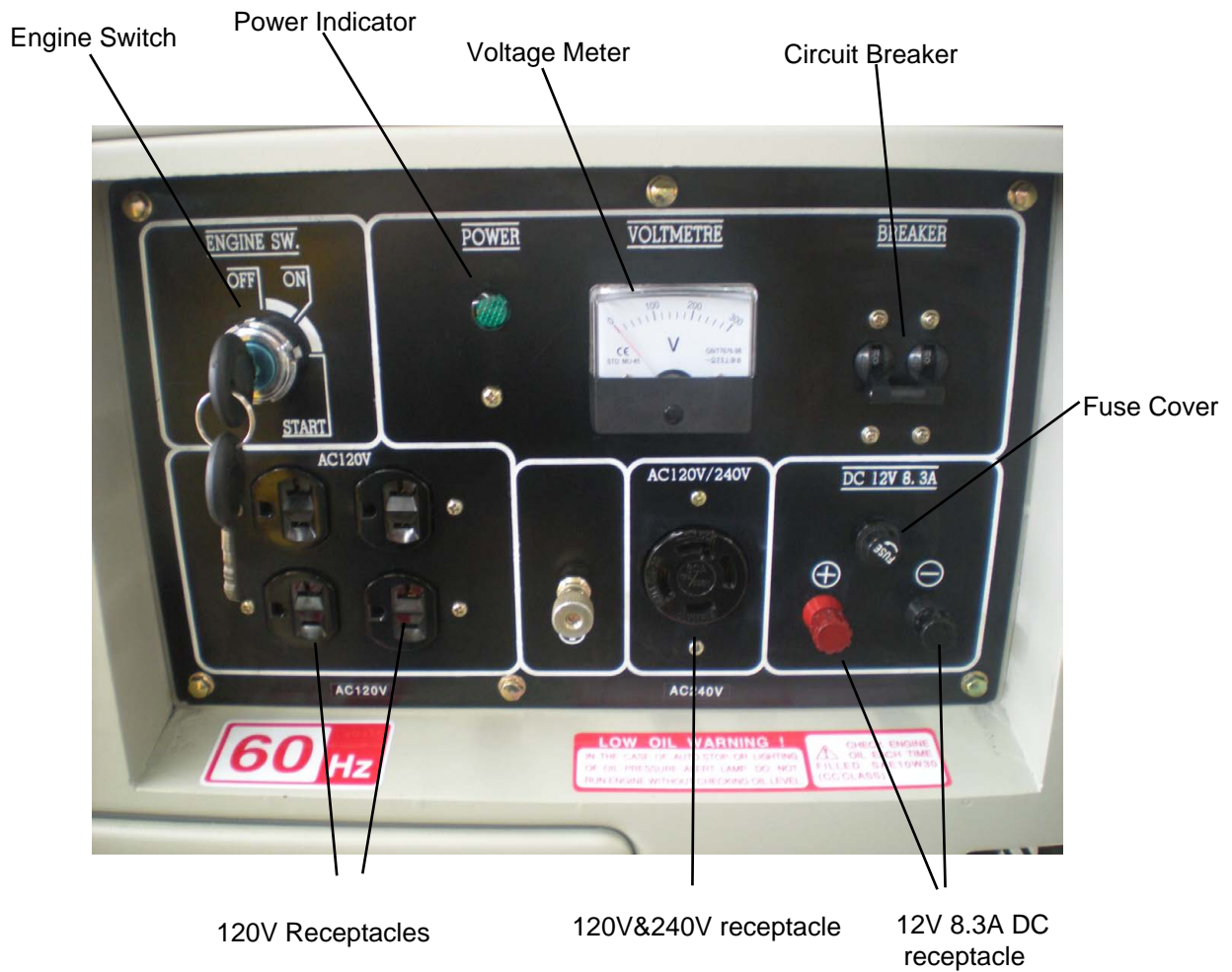
1. Before service, maintenance, or cleaning:
 - a. Turn the engine switch to its "OFF" position.
 - b. Allow the engine to completely cool.
2. Keep all safety guards in place and in proper working order. Safety guards include mechanical guards, and heat shields, among other guards.

- 3. Do not alter or adjust any part of the equipment or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician may adjust parts that may increase or decrease governed engine speed.**
4. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during service.
5. All connections from the Generator to the load must be installed by a licensed electrician in compliance with local, state, and federal laws.
6. The generator must be grounded in accordance with applicable electrical codes and standards before operation.
7. Insulate all connections and disconnected wires.
8. Do not connect or disconnect load connections while standing in water or on wet ground.
9. Do not overload the generator. Over loading can cause fires in the electrical cords, in addition to generator and appliance damage.
10. Connect the generator only to a load or electrical system (120 volt or 240 volt) that is compatible with the electrical characteristics and rated capacities of the generator.
11. Set up the generator outdoors in a well-ventilated, dry area, away from building air intakes. The generator should be protected from direct exposure to rain and snow. Do not set up the generator on a conductive surface such as a metal deck.
12. Do not connect generator directly into a home's electrical lines. Do not plug a generator into an outlet in the home. Connecting a generator directly to a utility power supply can 'back feed' along the power lines and kill or injure utility workers working on the lines.
13. Do not charge vehicle batteries with this Generator.
14. Maintain labels and nameplates on the equipment. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
15. Have the equipment serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the equipment is maintained. Do not attempt any service or maintenance procedures not explained in this manual or any procedures that you are uncertain about your ability to perform safely or correctly.
16. Store equipment out of the reach of children.
17. Follow scheduled engine and equipment maintenance.
18. Refueling Precautions:
 - a. Do not smoke, or allow sparks, flames, or other sources of ignition around the equipment, especially when refuelling.
 - b. Do not refill the fuel tank while the engine is running or hot.
 - c. Do not fill fuel tank to the top. Leave a little room for fuel expansion.
 - d. Refuel in a well-ventilated area only.

2. Unpacking

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call 1-866-393-3968 as soon as possible.

3. Controls



4. Set up instructions



Read the entire important safety information section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠ WARNING

To prevent serious injury from accidental starting: Turn the power switch of the equipment to its “OFF” position, wait for the engine to cool before assembling or making any adjustments to the equipment.

⚠ WARNING

To prevent serious injury: Operate only with proper spark arrestor installed.

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

A. Location

1. The Generator must be installed outdoors where ventilation is readily available.
2. Install the Generator so that the air inlets and outlets are not blocked by obstructions such as bushes, trees, or snow drifts. Locating it in the path of heavy winds or snowdrifts may require the placement of a barrier for protection. The air inlet should face the prevailing wind direction.
3. Install the Generator on a concrete slab or other area where water can not reach it.
4. Generator placement should allow four feet of access on all sides for maintenance.
5. Place the Generator as close as possible to the electrical tools and equipment being powered to reduce the length of extension cords.

B. Grounding

1. Connect a #12 AWG grounding wire (not included) from the Grounding Point on the Generator to a grounding rod (not included) that has been driven at least 24 inches into the ground. The grounding rod must be a copper or brass rod which can adequately ground the Generator. Only a trained and licensed electrician should perform this procedure.



Grounding Point

2. Electrical and other permits may be required for the installation of emergency power systems. Investigate local building and electrical codes before installing this unit. Installation must be completed by a licensed contractor.

5. Operating Instructions



Read the entire important safety information section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

A. Starting the Engine



Inspect engine and equipment looking for damaged, loose, leaking and missing parts before set up and starting. If any problems are found, do not use equipment until fixed properly.

Checking and Filling Engine Oil

CAUTION! Your Warranty is VOID if the engine's crankcase is not properly filled with oil before each use. Before each use, check the oil level. Do not run the engine with low or no engine oil. Running the engine with no or low engine oil WILL permanently damage the engine.

1. Open the front panel; remove the dip stick and wipe it off with a clean rag.
2. Reinsert the dipstick completely and remove it to check the oil level. The oil level should be between the high and low marks on the dipstick.
3. If the oil level is below the low mark on the dipstick add the appropriate type of oil until the oil level is between the high and the low marks.

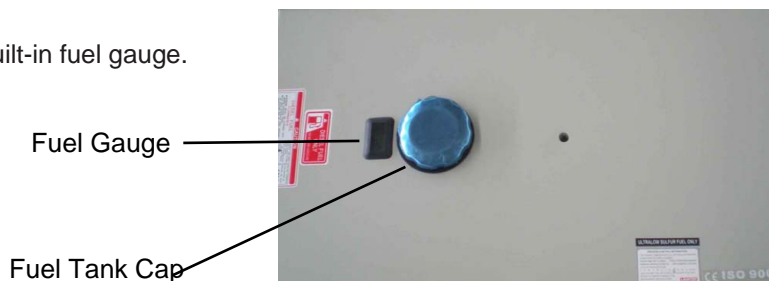
Oil type: SAE 5W-40

4. Replace the Oil Dipstick.
5. Wipe off any spilled oil.

CAUTION! Do not run the engine with too little or too much oil. The engine will be permanently damaged.

Checking and Filling Fuel

1. Check the fuel level on the built-in fuel gauge.



WARNING! To prevent serious injury from fire: Fill the fuel tank in a well-ventilated area away from ignition sources. Do not smoke.

2. To fill the Fuel Tank, first wipe off the Fuel Tank Cap and the surrounding area.
3. Unscrew, and remove the Fuel Tank Cap.
4. Fill the Fuel Tank to about 1 inch under the fill neck of the tank with #2 diesel.
5. Then replace the Fuel Tank Cap.

Bleed the fuel line

This is a two man operation. Place rags under the bleeding points to catch flow of fuel.

1. The fuel system should be bled to remove possible trapped air from the system before first use and after each fuel filter, fuel tank flushing, or general service of the diesel generator. Note: Place rags at the bleeding points to capture spilled fuel.
2. Turn the fuel valve to the off position. Top off fuel tank with fresh diesel fuel. Slide the hose clamp away from the fuel pump end. Loosen the hose at the pump to allow fuel to bleed out. Turn the fuel valve to its open position. Depress the decompression lever and while holding it down crank the engine for a few seconds at a time. Fuel and trapped air will emerge from the line and as soon as just fuel flows without traces of air, push the fuel line back onto the intake of the pump and stop cranking the engine. Reattach the hose clamp. **Note:** Never crank the engine more than ten seconds at a time. Allow at least one minute prior to further cranking.

3. Using two wrenches, hold the injector with one and back off the steel feed line nut with the other wrench. Repeat the above mentioned flushing cycle to bleed the air from the injector. Wipe all spilled fuel from the engine and components. Note: Do not close the fuel valve with the engine running. This may only be done for the intention of shutting the engine off should the fuel shut-off system fail.

Connect the Battery

The Generator ships with the negative battery cable disconnected. Before the generator can be started the covering on the battery cable must be removed and the cable must be secured to the negative ground terminal on the battery. Recheck battery's positive terminal connection for tightness.

How to Shut Engine Off

A diesel engine is not operated like a gasoline engine. When operating a diesel engine, one should be aware of various options of how to shut the engine off.

1. Turn the ignition key to the off position.
2. Push down on the fuel shut off lever to release the Control Handle (13).
3. Turn the fuel valve to its "OFF" position.

Start Procedure

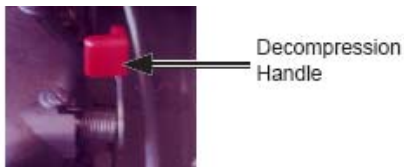
Before starting the engine:



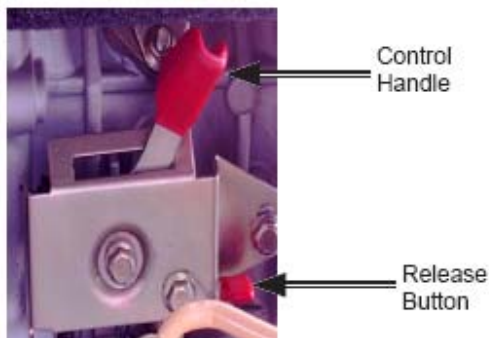
- a. Follow the Set Up Instructions to prepare the equipment.
- b. Inspect the equipment and engine.
- c. Fill the engine with the proper amount and type of fuel and oil.
- e. Read the Equipment Operation section that follows.

To start the engine:

1. Unplug all loads from the Generator before starting to prevent permanent damage to any appliances or tools.
2. Depress the Decompression Handle (16) all the way (Cold starting only).



3. Open the front panel and turn the fuel shut-off valve to its "OPEN" position.
4. Rotate the Control Handle (13) to the right until release button on the Right hand side of the Handle Bracket (12) pops up and locks in place.



5. Insert the engine key into the ignition and turn it to "START" position for up to 10 seconds. Note: To prolong starter life, use short starting cycles (10 seconds maximum). If the engine does not start, wait one minute before attempting to start again.

Break-in Period

1. Breaking-in the engine will help to ensure proper equipment and engine operation, and will extend the engine's lifespan. The warranty is void if the engine is not broken in properly. The first 20 hours of operation is the break-in period.
2. During the first 3 hours of use:
Do not apply a heavy load to the equipment.
3. After the first 20 hours of use:
Change the engine oil.
Under normal operating conditions subsequent maintenance follows the schedule explained in the Maintenance AND Service section.

Equipment Operation

To Power Tools and Equipment:

1. Prior to powering tools and equipment, make sure the Generator's rated wattage capacity (5000 W) is adequate to supply all electrical loads that the unit will power. If powering exceeds the Generator's capacity, it may be necessary to group one or more of the tools and/or equipment for connection to a separate Generator.
2. Start the Generator with no loads attached. Once the Generator warms up, with the equipment or tools turned off, connect the Power Cords of the AC tools and equipment into the AC Outlets. Only connect 120V AC tools to the 120V AC Outlets. Only connect 240V AC NEMA L14-30 type plug tools to the 240V AC Outlet. **Do not use this generator to charge DC vehicle batteries.** The Generator has a Circuit Protector to protect the unit in case of an overload. If an overload occurs, the Circuit Breaker will switch to its "OFF" position and cause the Generator to shut down. The Pilot Light will shut off to show that the Circuit Protector has been tripped. Disconnect all devices and press the Circuit Breaker back up to reset the Generator.
3. When finished using the Generator turn the tools off and unplug them. Allow the Generator to run for several minutes with no devices connected to allow the temperature to stabilize. Turn the Power Switch to its "OFF" position. Turn the Fuel Valve to the "OFF" position.
4. To prevent accidents remove the key and disconnect negative battery terminal after use. Wait for the engine to cool, clean external parts with clean cloth, then store the equipment out of children's reach according to the Storage instructions in this manual. If the Generator is not going to be used again soon, drain the diesel fuel.

6. Technical Specifications

Engine Type		Four stroke single cylinder OHV diesel, 10HP
Bore x Stroke		86 x72mm
Compression Ratio		19±:1
Displacement		418cc
Rotation viewed from PTO (power takeoff-the output shaft)		Counterclockwise
Fuel	Type	#0 Diesel Fuel
	Capacity	4.0 Gallons
Engine Oil	Type	SAE 20W
	Capacity	1.65L
Valve Clearance (cold)	Intake	0.10~0.15mm
	Exhaust	0.10~0.15mm
Speed	Idle	1,100RPM
	Maximum	3,600RPM
Rated Wattage		5000 Watts
Maximum Wattage		5500 Watts
Run Time @ Full Load		7 Hour with full tank
Sound Level		96 dB

At high altitudes, the engine's carburetor, governor, and any other parts that control the fuel-air ratio will need to be adjusted by a qualified mechanic to allow efficient high-altitude use and to prevent damage to the engine and any other devices used with this product.

7. Servicing

⚠️WARNING

To prevent serious injury from accidental starting: Turn the power switch of the equipment to its “OFF” position, wait for the engine to cool before performing any inspection, maintenance, or cleaning procedures.

⚠️WARNING

To prevent serious injury from equipment failure: Do not use damaged equipment. If abnormal noise, vibration, or excess smoking occurs, have the problem corrected before further use.

Maintenance Procedures



Many maintenance procedures, including those not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment or engine, have a qualified technician service the equipment instead.

Note: Warranty is void if proper maintenance and servicing procedures are not followed.

Engine Oil Change

CAUTION! Oil is very hot during operation and can cause burns. Wait for engine to cool before changing oil.

1. Place a drain pan (not included) underneath the crankcase’s drain plug.
2. Remove the drain plug and empty oil. Recycle used oil.
3. Inspect drain plug gasket for damage or tears. Replace gasket if damaged. Replace the drain plug and tighten it.
4. Refill the oil to the proper level following the instructions under the Starting the Engine section.

Air Filter element Maintenance

1. Routine maintenance to the air cleaner helps maintain proper airflow to the engine. Service the air cleaner according to the following steps every 250 or 500 hours, or more often when using the generator in a dusty area.
2. Wipe off the air cleaner cover.
3. Remove the air cleaner maintenance panel by unscrewing the bolts with 10-mm wrench.
4. Remove the wing nut from the bolt holding the air cleaner cover. Remove the air cleaner cover.
5. Take out the used air cleaner element. Replace with a new element.
6. Reinstall the air cleaner cover, tighten the wing nut, then screw back the air cleaner maintenance panel.

Fuel Filter Replacement



WARNING! To prevent serious injury from fire: Replace the fuel filter in a well-ventilated area away from ignition sources. Do not smoke.

1. Wait for engine to cool completely before proceeding.
2. Wear protective gear including, ANSI approved safety goggles.
3. Turn the fuel valve to the “off” position.
4. Unscrew the bolt holding the fuel filter to the frame using a 13mm wrench. Pull the fuel valve/filter assembly out of the enclosure. Place a bucket under the assembly to catch the fuel.
5. Remove the fuel filter cup, and the filter element.

6. Clean the cup of all sediment using a rag or brush.
7. Replace the fuel filter element.
8. Reinstall the fuel filter element, fill the cup with fresh and clean diesel fuel and assemble per steps 5 and 4 above.
9. Open the fuel valve until the filter is filled.
10. Remove the hose clamp and slightly remove fuel outlet hose to purge out any trapped air in the line. Re-attach the hose and clamp.
11. Remove four screws and Injector Inspection Cover (49) from top of Sound Shield Panel (41). Place a clean rag under the injector inlet and using two wrenches loosen input line nut by one turn. Tap starter to force fuel out of injector line. When air bubbles stop, re-tighten the input line nut.

Cleaning, Maintenance, and Lubrication Schedule

Note: This maintenance schedule is intended solely as a general guide. If performance decreases or if equipment operates unusually, check systems immediately. The maintenance needs of each piece of equipment will differ depending on factors such as duty cycle, temperature, air quality, fuel quality, and other factors.

Note: These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the engine and equipment.

After initial 20 operation hour period:

- a. Change engine oil.

Every 50 operation hours:

- a. Replace fuel filter.

Every 100 operation Hours:

- a. Change engine oil (or with frequent use; every three months).

Note: All maintenance procedures scheduled for 25, 50, and 100 operation hours should be performed at least yearly.

Every 250 operation Hours:

- a. Clean fuel tank.
- b. Clean carbon build-up from combustion chamber.
- c. Replace the air filter.

Every 500 operation hours:

- a. Clean fuel tank and fuel filter.

Storage

1. Wait for engine to cool, then clean engine with clean cloth.
2. When the equipment is to remain idle for longer than 20 days, prepare the engine for storage as follows:
 - a. Wait for engine to cool.
 - b. Disconnect battery.
 - c. Drain fuel tank.
 - d. Change engine oil.
3. Cover and store in a dry, well-ventilated area out of reach of children.

Diesel Fuel and Microbes

Microbes can grow in Diesel fuel and can, over time, interfere with the Generator's performance. When performance begins to suffer and the engine begins to produce black smoke, a high-quality biocide must be added to the fuel to kill the microbes. If left untreated the microbes will eventually clog the fuel lines and ruin the equipment. The biocide must continue to be added to the fuel until the microbes are completely destroyed and the fuel runs pure again.

Troubleshooting

Problem	Possible Causes	Probable Solutions
Engine will not start	FUEL RELATED: <ol style="list-style-type: none"> 1. No fuel in tank or fuel valve closed. 2. Air trapped in fuel line/Filter. 3. Low quality or deteriorated, old diesel. 4. Not enough oil in crankcase. 5. Dirty fuel passageways blocking fuel flow. 6. Low oil sensor failure. 7. Generator is not on level surface. 8. Load connected. 9. Air filter dirty. 10. Battery dead. 	FUEL RELATED: * <ol style="list-style-type: none"> 1. Open fuel valve and fill fuel tank. 2. Bleed fuel line. 3. Use only fresh #2 diesel fuel. 4. Add or replace oil. 5. Clean out passageways using diesel fuel additive or biocide. Heavy deposits may require further cleaning. 6. Add oil, disconnect low oil sensor, start engine and allow to run for several minutes before reconnecting the sensor. 7. Move the generator to a level surface to prevent low oil shutdown from triggering. 8. Disconnect load. 9. Change air filter. 10. Replace battery.
Black smoke from exhaust	<ol style="list-style-type: none"> 1. Generator overloaded. 2. Oil in cylinder. 3. Contaminated diesel fuel. 4. Fuel injection malfunction. 5. Clogged air filter. 6. Improper setting for specific altitude. 	<ol style="list-style-type: none"> 1. Reduce load. 2. Check oil level and drain excess from crankcase. 3. Treat engine with biocide. 4. Have the Generator serviced by a qualified mechanic. 5. Replace air filter. 6. Have a qualified technician inspect/ reset the engine fuel system.
White smoke from exhaust	<ol style="list-style-type: none"> 1. Water in fuel 	<ol style="list-style-type: none"> 1. Empty and clean fuel tank, fuel lines and filter.
Generator runs but does not support all loads	<ol style="list-style-type: none"> 1. Device connected is faulty. 2. Engine overloaded. 	<ol style="list-style-type: none"> 1. Check devices for problems. 2. Turn off and unplug devices, shut Generator off for several minutes, restart generator, connect fewer loads.
Engine backfires	<ol style="list-style-type: none"> 1. Impure or low quality diesel fuel. 2. Engine too cold. 3. Engine not properly adjusted for high altitude operation. 4. Intake valve stuck, incorrect timing, clogged carburetor, or overheated engine. 	<ol style="list-style-type: none"> 1. Fill fuel tank with fresh #2 diesel fuel. 2. Use cold weather fuel and oil additives to prevent backfiring. 3. Qualified technician must adjust engine at altitudes greater than 5,000 feet above sea level. 4. Have qualified technician diagnose and service engine.
AC output, but not DC output	<ol style="list-style-type: none"> 1. Fuse burnt out. 	<ol style="list-style-type: none"> 1. Replace fuse.

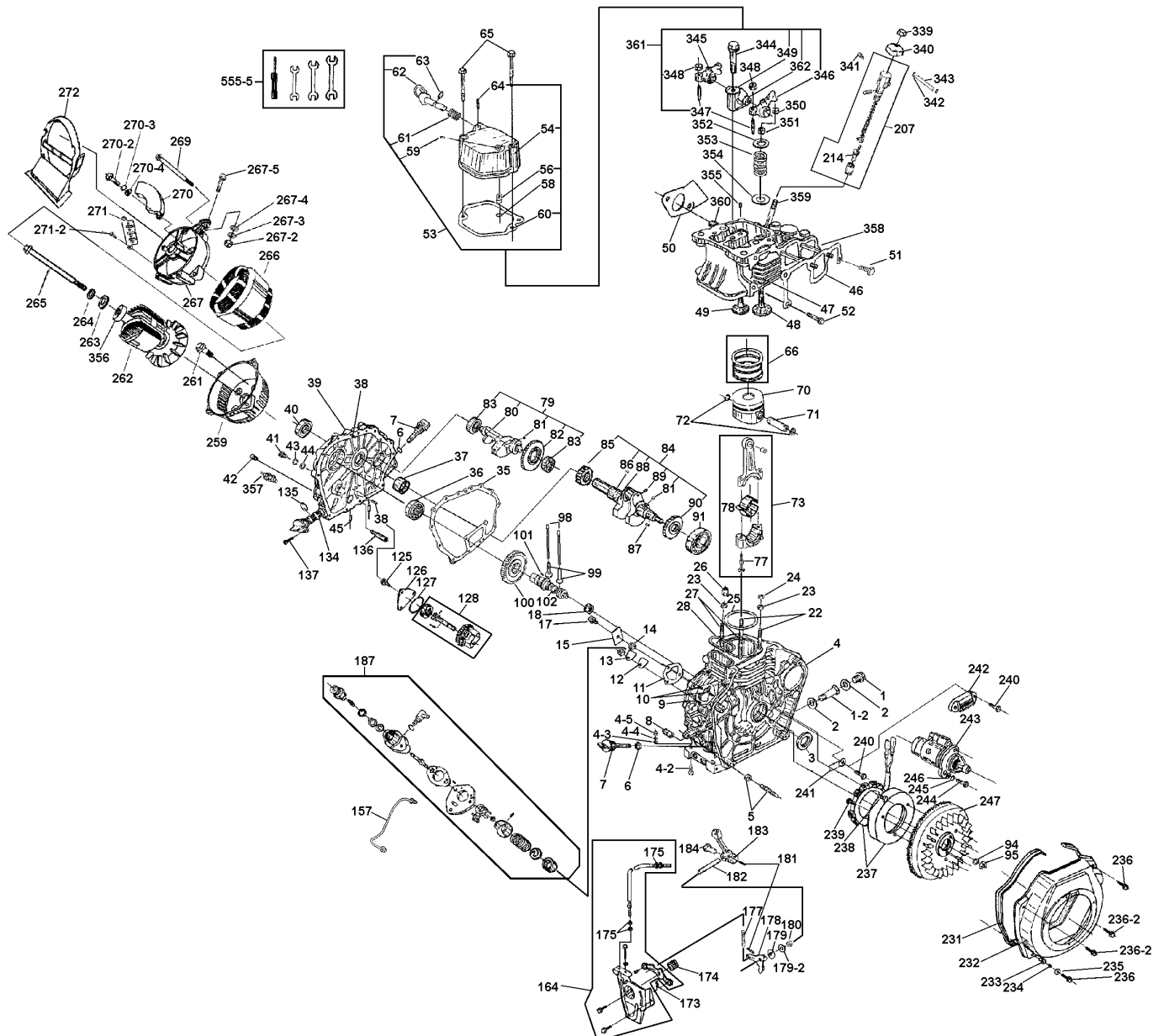
* Every time fuel system is serviced, replace the fuel filter.



Follow all safety precautions whenever diagnosing or servicing the equipment or engine.

Service Manual

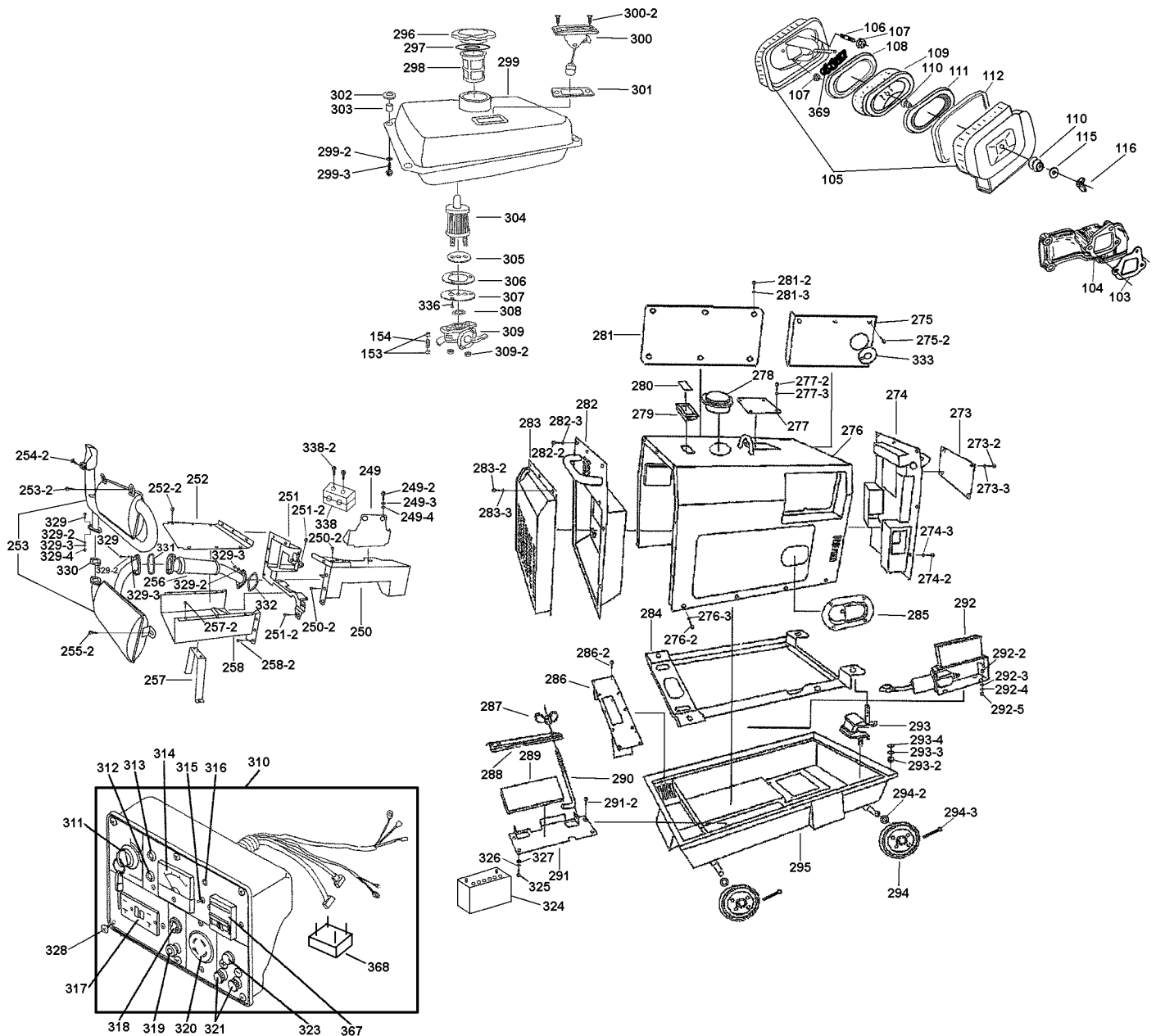
5500W Silent Diesel Generator with Electric Start Engine Diagram



Service Manual

5500W Silent Diesel Generator with Electric Start

External Components Diagram



Parts Pricing List

Diag.	Description	Qty	Diag.	Description	Qty
1	DRAIN PLUG	1	53	HEAD COVER ASS'Y	1
1-2	DRAIN PLUG EXTENSION	1	54	HEAD COVER	1
2	DRAIN PLUG SEAL	2	56	COMPLETE BREATHER	1
3	OIL SEAL	1	58	O-RING	1
4	CYLINDER BLOCK	1	59	PLUG	1
4-2	HEX. BOLT	2	60	HEAD COVER GASKET	1
4-3	WASHER	2	61	DECOMPRESSION SPRING	1
4-4	SPRING WASHER	2	62	DECOMPRESSION SHAFT	1
4-5	HEX. NUT	2	63	O-RING	1
5	FUEL CONTROLLER ASS'Y	1	64	PIN	1
6	O-RING	2	65	FLANGE HD HEX. BOLT	2
7	OIL GAUGE	2	66	PISTON RING SET	1
8	NEEDLE BEARING	2	70	PISTON	1
9	THREADED STUD (SHORT)	1	71	PISTON PIN	1
10	THREADED STUD (LONG)	1	72	RETAINING RING / BORE	2
11	FUEL PUMP GASKET	1	73	COMPLETE CONNECTING ROD	1
12	SEAL PLATE GASKET	1	77	ROD BOLT	2
13	SEAL PLATE	1	78	CRANK PIN BUSHING	2
14	FLANGE HD HEX. NUT	3	79	BALANCE SHAFT ASS'Y	1
15	BALL BEARING RETAINER	1	80	BALANCE SHAFT	1
17	FLANGE HD HEX. BOLT	1	81	KEY	2
18	NEEDLE BEARING	1	82	BALANCE GEAR	1
22	CYLINDER HEAD STUD (SHORT)	2	83	BALL BEARING	2
23	SPECIAL WASHER	4	84	CRANKSHAFT ASS'Y	1
24	CYLINDER HEAD NUT (SHORT)	2	85	TIMING GEAR	1
25	CYLINDER HEAD GASKET	1	86	KEY	1
26	CYLINDER HEAD NUT (LONG)	2	87	KEY	1
27	CYLINDER HEAD STUD (LONG)	2	88	CRANKSHAFT	1
28	SEAL RING	1	89	PLUG	1
35	CRANKCASE GASKET	1	90	BALANCE DRIVING GEAR	1
36	BALL BEARING	1	91	BALL BEARING	1
37	MAIN BUSHING	1	94	BUSHING	1
38	PIN	2	95	FLYWHEEL NUT	1
39	CRANKCASE COVER	1	98	COMPLETE VALVE ROD	2
40	OIL SEAL	1	99	VALVE TAPPET	2
41	FLANGE HD HEX. BOLT	16	100	CAMSHAFT TIMING GEAR	1
42	FLANGE HD HEX. BOLT	1	101	KEY	1
43	SPRING WASHER	16	102	CAMSHAFT	1
44	WASHER	16	103	AIR CLEANER GASKET	1
45	PLUG	3	104	INTAKE PIPE	1
46	AIR INTAKE GASKET	1	105	COMPLETE AIR FILTER HOUSING	1
47	CYLINDER HEAD	1	106	THREADED STUD	2
48	INTAKE VALVE	1	107	FLANGE HD HEX. NUT	3
49	EXHAUST VALVE	1	108	AIR FILTER HOUSING SHOCK ABS.	1
50	EXHAUST GASKET	1	109	COMPLETE AIR FILTER ELEMENT	1
51	FLANGE HD HEX. BOLT	2	110	BOLT SHOCK ABSORBER	2
52	FLANGE HD HEX. BOLT	1	111	AIR FILTER COVER SHOCK ABS.	1

Parts Pricing List

Diag.	Description	Qty	Diag.	Description	Qty
112	AIR FILTER COVER SEAL RING	1	247	FLYWHEEL WITH GEAR	1
115	SPECIAL WASHER	1	249	BRACKET FOR COVER (SPEC. ORD.)	1
116	WING NUT	1	249-2	FLANGE HD HEX. BOLT	2
125	FLANGE HD HEX. BOLT	3	249-3	SPRING WASHER	2
126	OIL PUMP COVER	1	249-4	WASHER	2
127	O-RING	1	250	FRONT FAN HOOD (SPEC. ORD.)	1
128	COMPLETE OIL PUMP	1	250-2	FLANGE HD HEX. BOLT	2
134	OIL FILTER	1	251	END FAN HOOD (SPEC. ORD.)	1
135	O-RING	1	251-2	FLANGE HD HEX. BOLT	2
136	INTAKE PIPE	1	252	GUIDE BELLOWS COVER (SPEC. ORD.)	1
137	FLANGE HD HEX. BOLT	1	252-2	FLANGE HD HEX. BOLT	9
153	CLAMP	2	253	COMPLETE MUFFLER	1
154	FUEL PIPE	1	253-2	FLANGE HD HEX. BOLT	2
157	COMPLETE FUEL INJECTION PIPE	1	254-2	PAN HD SCREW	1
164	COMPLETE CONTROL LEVER	1	255-2	FLANGE HD HEX. BOLT	2
173	SMALL RETURN SPRING	1	256	MUFFLER RIPPLE PIPE (SPEC. ORD.)	1
174	BIG RETURN SPRING	1	257	GUIDE BELLOWS BRACK. (SPEC. ORD.)	1
175	THIN HEX. NUT	4	257-2	FLANGE HD HEX. BOLT	2
177	GOVERNOR SPRING	1	258	GUIDE BELLOWS (SPEC. ORD.)	1
178	GOVERNOR LEVER	1	258-2	FLANGE HD HEX. BOLT	6
179	WASHER	1	259	FRONT COVER	1
179-2	COPPER WASHER	1	261	FLANGE HD HEX. BOLT	4
180	OIL SEAL	1	262	COMPLETE ROTOR	1
181	PIN	2	263	WASHER	1
182	LEVER SHAFT	1	264	SPRING WASHER	1
183	LEVER FORK	1	265	ALTERNATOR BOLT	1
184	TAPPET	1	266	COMPLETE STATOR	1
187	COMPLETE FUEL PUMP	1	267	REAR COVER	1
207	COMPLETE FUEL NOZZLE	1	267-2	HEX. NUT	2
214	NOZZLE VALVE	1	267-3	SPRING WASHER	2
231	FAN COVER SHOCK ABSORBER	1	267-4	WASHER	2
232	FAN COVER	1	267-5	HEX. BOLT	2
233	FAN COVER BOLT SHOCK ABSORBER	4	269	FLANGE HD HEX. BOLT	4
234	COLLAR	4	270	CAPACITOR	1
235	WASHER	4	270-2	HEX. BOLT	2
236	FLANGE HD HEX. BOLT	2	270-3	SPRING WASHER	2
236-2	FLANGE HD HEX. BOLT	2	270-4	WASHER	2
237	FLYWHEEL GENERATOR	1	271	TERMINAL BLOCK	1
238	FLANGE HD HEX. BOLT	3	271-2	FLANGE HD HEX. BOLT	2
239	COUNTERSUNK HD SCREW	3	272	END COVER	1
240	PAN HD SCREW	3	273	AIR FILTER WINDOW COV. (SPEC.)	1
241	CLAMP	1	273-2	FLANGE HD HEX. BOLT	4
242	REGULATOR	1	273-3	WASHER	4
243	STARTING MOTOR	1	274	FRONT ENGINE COVER (SPEC. ORD.)	1
244	FLANGE HD HEX. BOLT	2	274-2	FLANGE HD HEX. BOLT	10
245	SPRING WASHER	2	274-3	WASHER	10
246	WASHER	2	275	AIR FILTER INTAKE SEAT (SPEC. ORD.)	1

Parts Pricing List

Diag.	Description	Qty	Diag.	Description	Qty
275-2	FLANGE HD HEX. BOLT	6	309-2	FLANGE HD HEX. NUT	2
276	SOUNDPROOF COVER (SPEC. ORD.)	1	310	CONTROL PANEL ASS'Y	1
276-2	FLANGE HD HEX. BOLT	8	311	STARTER SWITCH WITH KEY	1
276-3	WASHER	8	312	LOW OILWARNING INDICATOR LIGHT	1
277	UPPER COVER (SPEC. ORD.)	1	313	POWER INDICATOR LIGHT	1
277-2	FLANGE HD HEX. BOLT	4	314	VOLTMETER	1
277-3	WASHER	4	315	GLOW PLUG MODULE AND SWITCH	1
278	GAS CAP SHOCK ABS. (SPEC. ORD.)	1	316	GLOW PLUG INDICATOR LIGHT	1
279	FUEL INDICATOR RUBBER SEAL	1	317	DUAL GFI 120V OUTLET	1
280	FUEL INDICATOR GLASS	1	318	VOLTAGE SWITCH (120V / 240V)	1
281	LEFT SIDE COVER (SPEC. ORD.)	1	319	GROUND TERMINAL	1
281-2	FLANGE HD HEX. BOLT	6	320	TWIST LOCK DUAL 120V / 240V OUTLET	1
281-3	WASHER	6	321	DC TERMINALS	1
282	MUFFLER SUP. BOARD (SPEC. ORD.)	1	323	FUSE	1
282-2	FLANGE HD HEX. BOLT	7	324	BATTERY	1
282-3	WASHER	7	325	FLANGE HD HEX. BOLT	2
283	ENGINE END COVER (SPEC. ORD.)	1	326	SPRING WASHER	2
283-2	FLANGE HD HEX. BOLT	6	327	HEX. NUT	2
283-3	WASHER	6	328	PAN HD SCREW	6
284	BASE (SPEC. ORD.)	1	329	FLANGE HD HEX. BOLT	4
285	LEVER HANDLE	1	329-2	SPRING WASHER	6
286	UNDER PAN AIR HOOD (SPEC. ORD.)	1	329-3	WASHER	6
286-2	FLANGE HD HEX. BOLT	10	329-4	HEX. NUT	2
287	WING NUT	2	330	MUFFLER CONNEC. GAS. (SPEC. ORD.)	1
288	BATTERY RETAINING BAR	1	331	RIPPLE PIPE GASKET (SPEC. ORD.)	1
289	BATTERY PAD	1	332	RIPPLE PIPE GASKET (SPEC. ORD.)	1
290	HOOK BOLT	2	333	AIR FILTER SHOCK ABS. (SPEC. ORD.)	1
291	BATTERY HOLDER	1	336	PAN HD SCREW	3
291-2	FLANGE HD HEX. BOLT	4	338	FUEL LINE SHOCK ABSORBER	1
292	CONTROL BOX	1	338-2	FLANGE HD HEX. BOLT	2
292-2	FLANGE HD HEX. BOLT	2	339	FLANGE HD HEX. NUT	2
292-3	SPRING WASHER	2	340	FUEL INJECTOR RETAINING PLATE	1
292-4	WASHER	2	341	FUEL LINE FITTING	1
292-5	HEX. NUT	2	342	FUEL RETURN CLIP	2
293	SHOCK ABSORBER	4	343	FUEL RETURN LINE	1
293-2	HEX. NUT	4	344	FLANGE HD HEX. BOLT	1
293-3	SPRING WASHER	4	345	EXHAUST ROCKER ARM	1
293-4	WASHER	4	346	INTAKE ROCKER ARM	1
294	WHEEL	4	347	VALVE SCREW	2
294-2	WASHER	4	348	SPECIAL HEX. NUT	2
294-3	COTTER PIN	4	349	ROCKER ARM SUPPORT	1
295	SOUNDPR. UNDER PAN (SPEC. ORD.)	1	350	VALVE CAP	2
296	FUEL TANK CAP	1	351	VALVE COTTER	2
297	FUEL CAP SEAL	1	352	SPRING RETAINER	2
298	FUEL TANK STRAINER	1	353	VALVE SPRING	2
299	FUEL TANK	1	354	VALVE SPRING WASHER	2
299-2	FLANGE HD HEX. BOLT	4	355	PIN	1
299-3	WASHER	4	356	BALL BEARING	1
300	FUEL LEVEL INDICATOR	1	357	OIL PRESSURE SWITCH	1
300-2	COUNTERSUNK HD SCREW	2	358	THREADED STUD	2
301	FUEL TANK INDICATOR GASKET	1	359	THREADED STUD	2
302	SHOCK ABSORBER FOR FUEL TANK	4	360	THREADED STUD	2
303	METAL SLEEVE	4	361	ROCKER ARM ASS'Y	1
304	COMPLETE FUEL FILTER	1	362	ROCKER ARM SHAFT	1
305	FUEL FILTER GASKET	1	367	CIRCUIT BREAKER	1
306	FUEL VALVE GASKET	1	368	DIODE BRIDGE	1
307	FUEL VALVE PLATE	1	369	GLOW SPRING	1
308	O-RING	1	555-5	TOOL BAG	1
309	FUEL VALVE	1		BILINGUAL MANUAL KCG-5000DES	1